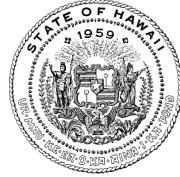


JOSH GREEN, M.D.  
GOVERNOR  
KE KIA'ĀINA



DEPT. COMM. 48

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KA LUNA HO'OMALU HANA LAULĀ  
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LUNA 'ENEHANA

**STATE OF HAWAI'I | KA MOKU'ĀINA O HAWAI'I**  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | KA 'OIHANA LOIHELUA LAWELAWE LAULĀ

OFFICE OF ENTERPRISE TECHNOLOGY SERVICES | KE'ENA HO'OLANA 'ENEHANA

P.O. BOX 119, HONOLULU, HAWAII 96810-0119

November 26, 2025

The Honorable Ronald D. Kouchi  
President of the Senate  
and Members of the Senate  
Thirty-Third State Legislature  
State Capitol, Room 409  
Honolulu, Hawai'i 96813

The Honorable Nadine K. Nakamura  
Speaker and Members of the  
House of Representatives  
Thirty-Third State Legislature  
State Capitol, Room 431  
Honolulu, Hawai'i 96813

Aloha Senate President Kouchi, House Speaker Nakamura, and Members of the Legislature:

Pursuant to HRS section 27-43.6, which requires the Chief Information Officer to submit applicable independent verification and validation (IV&V) reports to the Legislature within ten days of receiving the report, please find attached the report the Office of Enterprise Technology Services received for the State of Hawai'i, Department of Human Services, Systems Modernization Project.

In accordance with HRS section 93-16, this report may be viewed electronically at <http://ets.hawaii.gov> (see "Reports").

Sincerely,

A handwritten signature in blue ink, appearing to read "Christine M. Sakuda".

Christine M. Sakuda  
Chief Information Officer  
State of Hawai'i

Attachments (2)



# Hawaii Department of Human Services Systems Modernization Project

Final IV&V Status Report  
for Reporting Period: October 1 – 31, 2025

*Submitted: November 17, 2025*

# Overview

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- [Executive Summary](#)
- [IV&V Findings and Recommendations](#)
- [IV&V Engagement Status](#)
- [Appendices](#)
  - [A – IV&V Criticality Ratings](#)
  - [B – Risk Identification Report](#)
  - [C – Acronyms and Glossary](#)
  - [D – Background Information](#)



Solutions that Matter

# Executive Summary

# Executive Summary



The BES project team began design work on the new change requests (CRs) that are needed to align to the FNS Policy mandates. DHS and the ASI continue discussions on prioritizing deferred functionality for future enhancement work. The project team continues to execute System Integration Testing (SIT), while ramping up work in Organizational Change Management (OCM), Implementation Readiness, and Training to prepare for the Pilot and Statewide go-live.

The IV&V team identifies the current primary areas of risk for the project as Requirements Management, Testing, and Project Management.

## Requirements Management:

- Significant work remains for both the ASI and DHS to complete their work to finalize all requirement refinement work, with 392 requirements still not mapped at the end of the reporting period.
- Additional work required to complete the revised SIRT documentation required by FNS is impacting requirements work overall and delaying the planned interim delivery of the RTM (November 3rd) for at least two weeks.

## Testing:

- The Velocity of testing continued to slow down in the reporting period
- DHS remains concerned about the progress in testing, with many test cases being blocked from execution

## Project Management:

- The ASI and DHS agreed to delay the start of User Acceptance Testing (UAT) to provide additional time to complete work on the new federally mandated Change Requests for the One Big Beautiful Bill (OBBB), also delaying SIT, Pilot, and the Statewide implementation. A new project schedule or funding solution that reflects these delays had not been finalized as of the end of the reporting period.

Aug	Sept	Oct	Category	IV&V Observations
		M	Project Management	The additional, federally mandated requirements that must be included in BES solution have impacted the project and will require a revised schedule to include this new work. Other schedules on the project, such as Maintenance and Operations (M&O) work, are also impacted, which is causing challenges in planning M&O work with DHS.

# Executive Summary



Aug	Sept	Oct	Category	IV&V Observations
L	L	L	System Design	The ASI hosted a second meeting to review the Online Help process, presenting changes made to the process based on the feedback from DHS. With the revised process, DHS provided its approval to proceed with implementing the Online Help leveraging Claude AI. It will be a considerable effort to develop the online help pages and then integrate with the BES application, but the ASI is confident they will have completed it by the start of UAT. Additionally, JAD sessions have started for the new change requests, with good collaboration between the ASI and DHS.
M	M	M	Configuration and Development	DHS and the ASI agreed to delay the start of UAT, Pilot and Statewide Implementation to allows time to complete development of all change requests. IV&V is working with the ASI to get clarification on completing implementation of configuration management, which must be in place when the Pilot starts.
L	L	L	Integration and Interface Management	The execution of technical interface testing made solid progress during the reporting period. If the ASI can keep this pace up and maintain the same low ratio of defects to executed test cases, the ASI is confident they can complete this testing by the end of SIT.
M	M	M	Testing	About 30% of remaining SIT tests are blocked in critical areas such as Eligibility and SSP, which also account for the largest share of unexecuted tests. Furthermore, only one-third of end-to-end (E2E) tests have passed, signaling potential issues with overall system readiness and stability.
M	M	M	Security and Privacy	BES had 11 critical findings in an open or in-progress state outside the 15-day remediation timeframe, and 1 critical finding was within the timeframe. BES had 27 high-rated findings in an open state outside the 30-day remediation timeframe, and 29 high-rated findings were within the timeframe.
M	M	M	Requirements Analysis & Management	The ASI's interim RTM delivery, originally scheduled for 11/3/25, is delayed by up to two weeks due to prioritization of the System Integration Report Tool (SIRT) project revision and 392 requirement still needing to be mapped to use cases. This delay reduces the time available for the project team to review and validate the BES system includes all contractually required functionality.

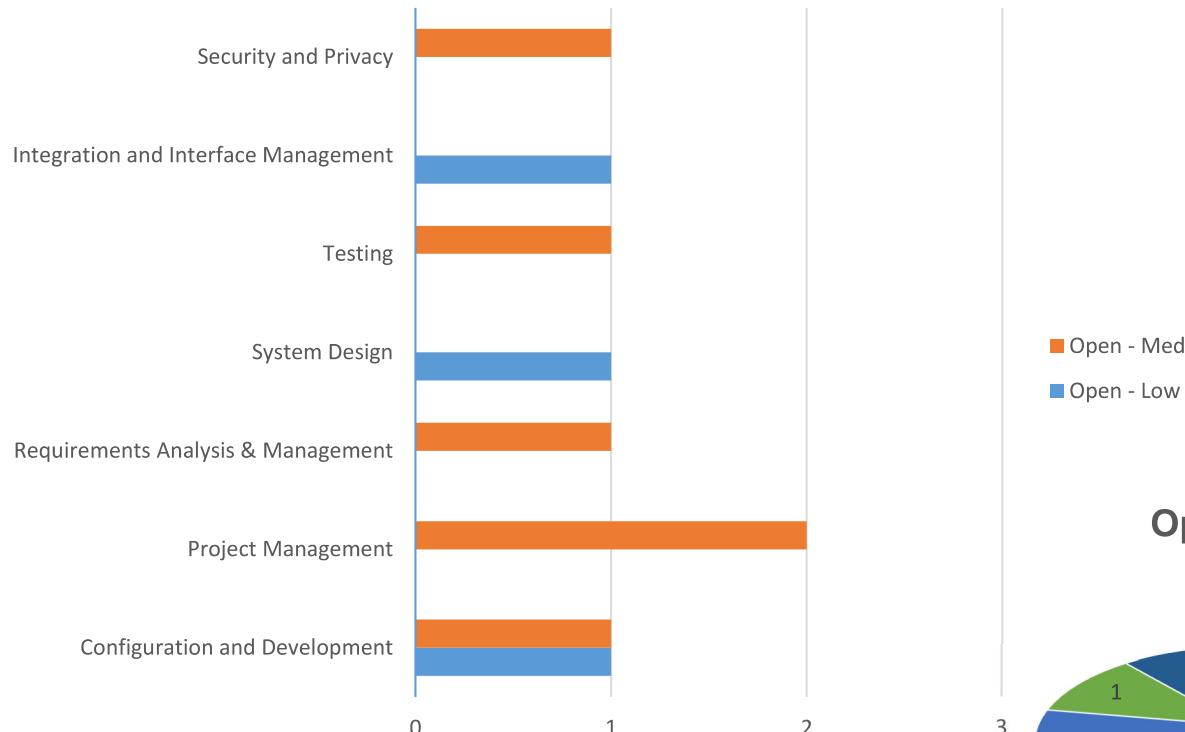
# IV&V Findings and Recommendations

# IV&V Findings and Recommendations

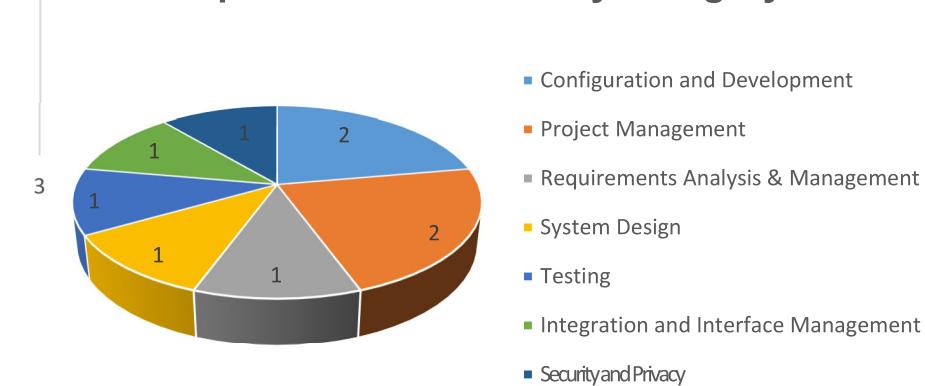


As of the October 2025 reporting period, PCG is tracking 9 open findings (7 risks, 2 issues) and has retired 84 findings. Of the 9 open findings, 6 are Medium, and 3 are Low.

## Open Risks & Issues



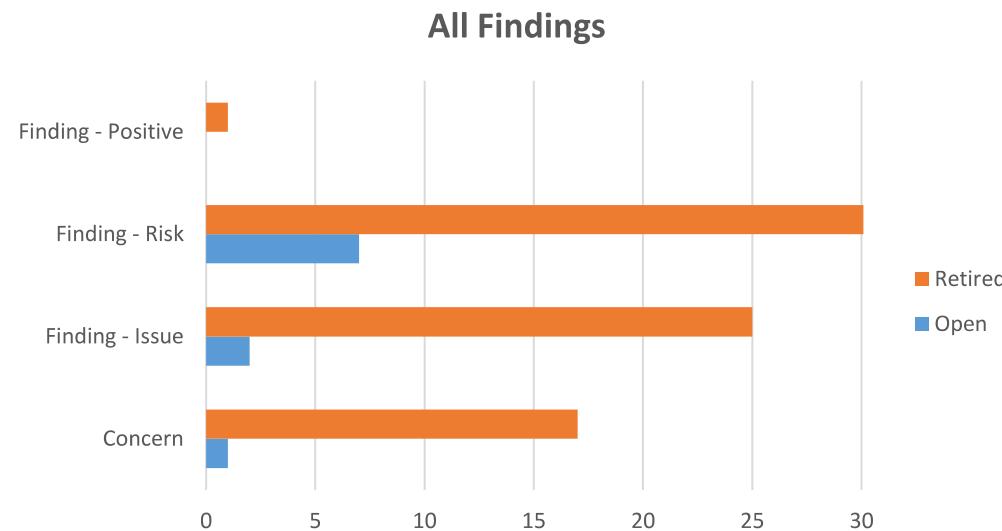
## Open Risks & Issues by Category



# IV&V Findings and Recommendations



The following figure provides a breakdown of the 94 IV&V findings (positive, risks, issues, concerns) by status (open, retired).



# IV&V Findings and Recommendations



## Findings Opened During the Reporting Period

#	Finding	Category
110	<p><b>Risk: Medium - The US Federal Government Shutdown may delay the BES project</b></p> <p><b>Observation:</b></p> <p>The BES Project relies on collaboration, funding, guidance, and approvals from Food and Nutrition Services (FNS). FNS staff are furloughed and unavailable to provide critical input, oversight, and decision-making support. Additionally, DHS priorities may change due to other critical and time-sensitive federal and State Policy changes that may require team members to be reassigned to other DHS mission-critical work.</p> <p><b>Significance:</b></p> <p>The absence of FNS on the BES Project may lead to:</p> <ul style="list-style-type: none"><li>• Inability to confirm federal policy interpretations which may result in incorrect or incomplete requirements.</li><li>• Possibility that the BES system may not meet FNS expectations, potentially jeopardizing FNS concurrence to enter Pilot and funding.</li><li>• Rework once the government reopens, increasing costs and resource strain.</li></ul>	Project Management

Recommendations	Progress
• Document all assumptions made in the absence of FNS input to facilitate future validation	New
• Identify alternative paths or temporary solutions to maintain progress while minimizing rework.	New
• Continue to communicate with State Executive leadership to communicate and gain support for decisions.	New
• Establish and maintain a list of FNS questions/updates, allowing DHS to quickly bring FNS current on project status and expedite items requiring FNS input when the government reopens.	New

# IV&V Findings and Recommendations



## Findings Opened During the Reporting Period

#	Finding	Category
109	<p><b>Risk: Medium - Lack of a current BES Maintenance &amp; Operations (M&amp;O) Schedule may Impact the ability of DHS and the ASI to manage the M&amp;O work effectively</b></p> <p><b>Observation:</b></p> <p>The project team is executing without a current Maintenance &amp; Operations (M&amp;O) schedule that aligns with the planned pilot and statewide go-live implementation timelines. The aged M&amp;O schedule does not reflect recent changes in milestones, resource assignments, or operational readiness activities necessary for a smooth transition to production. Additionally, DHS is unable to determine when resources are needed for DDI activities that may overlap with M&amp;O tasks, which may lead to resource constraints. The ASI has stated multiple times that the schedule is being updated, per DHS's repeated requests over the last couple of months. Additionally, ASI leadership of M&amp;O has changed multiple times, which may also impact maintenance of the M&amp;O schedule once reestablished.</p> <p><b>Significance:</b></p> <p>Failure to execute to a current M&amp;O schedule may result in:</p> <ul style="list-style-type: none"><li>• Inability for DHS and/or the ASI to effectively manage staff resources for both the DDI and M&amp;O activities and tasks</li><li>• Inadequate planning and preparation of the operations teams for pilot and go-live support.</li><li>• Missed or delayed execution of critical readiness activities such as environment setup, training, UAT testing, and support planning.</li><li>• Increased probability of service disruptions, user dissatisfaction, and stakeholder impact during implementation.</li></ul>	Project Management

# IV&V Findings and Recommendations



## Findings Opened During the Reporting Period

#	Finding	Category
109	<b>Risk - Lack of a current BES Maintenance &amp; Operations (M&amp;O) Schedule May Impact the ability to manage the M&amp;O work effectively</b> - Continued	Project Management

Recommendations	Progress
• Update the M&O schedule to reflect current project timelines, resource commitments, and operational readiness activities based on estimates developed by the staff that will perform that work.	New
• Establish a formal process for periodic review and validation of the M&O schedule with all relevant stakeholders.	New
• Ensure the M&O schedule is integrated into the overall DDI project schedule and implementation readiness plans to show overlap of resource needs, tasks and activities.	New
• Maintain alignment between development, operations, and DDI project management teams by creating cross-functional meetings that include team members from each silo to ensure consistent, timely communication thereby aiding in the change management processes.	New

# IV&V Findings and Recommendations



## Findings Retired During the Reporting Period

#	Finding	Category
82	<p><b>Issue – The lack of technical documentation may lead to incorrect implementation statements or delay the System Security Plan (SSP).</b></p> <p>IV&amp;V is retiring this finding based on the review of the updated System Security Plan (SSP), published on September 30th, 2025. As a result of additional documentation becoming available over the past year and completing the SSP Control Implementation validation, the ASI Security Team was able to fully update the SSP. The update reflects changes in the system and removes inaccuracies introduced during the early stages of SSP authoring, such as the system's design.</p>	Security and Privacy

# IV&V Findings and Recommendations



## Preliminary Concerns Investigated During the Reporting Period

#	Finding	Category
108	<p><b>Preliminary Concern - Unplanned federally mandated system requirements could lead to project delays and increase the project budget.</b></p> <p>The Food and Nutrition Services (FNS) organization is now unable to provide some interpretations on the required policy mandates due to the government shutdown, but DHS/ASI are continuing to move forward with those changes that are fully defined.</p>	Requirements Analysis & Management

# IV&V Findings and Recommendations



## System Design

#	Key Findings	Criticality Rating
73	<p><b>Risk – The planned BES infrastructure is complex, which could be difficult to implement and maintain, and could lead to schedule/cost impacts.</b></p> <p>Some defects reported during SIT have root causes in the stability of the BES infrastructure. The ASI states that the issues with shared resources and Bindplane software that occur in testing environments should not be present in production. However, IV&amp;V has not yet been provided with artifacts or project documentation to validate that these issues will not materialize in UAT or Production environments.</p>	

Recommendations	Progress
• ASI develop a process to closely monitor cloud and other product changes (software updates/new releases), manage changes, and regression test once updates are applied.	In Process
• The project team work to establish strong governance over the utilization and maintenance of various tools/components.	In Process
• ASI allot time in the schedule to conduct proof of concepts to assure infrastructure components work as expected.	In Process
• ASI maintain a detailed schedule for DevOps implementation tasks to avoid unexpected delays that could delay project milestones and the critical path.	In Process

# IV&V Findings and Recommendations



## Configuration and Development

#	Key Findings	Criticality Rating
70	<p><b>Risk – Insufficient configuration management could lead to development confusion and reduce the effectiveness of defect resolution.</b></p> <p>Additional information was requested from the ASI regarding progress in defining and implementing configuration management for BES, but as of the end of the reporting period no additional status information was provided.</p>	

Recommendations	Progress
<ul style="list-style-type: none"><li>ASI adhere to plans for configuration management as documented in BI-6 DDI Plan, Section 5.2 and clarify details and/or any changes with DHS.</li></ul>	In Process
<ul style="list-style-type: none"><li>ASI validate plans for configuration management with DHS and agree on a meaningful set of configuration items or settings they will track.</li></ul>	In Process

# IV&V Findings and Recommendations



## Configuration and Development

#	Key Findings	Criticality Rating
80	<p><b>Issue – Development delays have negatively impacted the project schedule and delayed go-live.</b></p> <p>It remains unclear if any development issues may delay the project, however additional work for change request (CR) 2025-040 ABAWD and SNAP Work Requirements updates will not be completed until 1/26/2026, which is after the planned start for User Acceptance Testing (UAT). To avoid phasing-in this functionality after UAT has started, the ASI and DHS have agreed to delay the start of UAT - which will push out go-live for Pilot and statewide implementation.</p>	

Recommendations	Progress
• ASI provides DHS with the time needed to effectively evaluate the software demonstrations (demos) and elicit productive design discussions with DHS attendees during each demo.	In Process
• IV&V recommends the project closely monitor progress on the customer correspondence CR and create a mitigation strategy to avoid delays.	In Process

# IV&V Findings and Recommendations



## Integration and Interface Management

#	Key Findings	Criticality Rating
93	<p><b>Risk – Due to the lack of physical and technical (Transport Layer) testing of the interfaces and data transfer failure, conditions may exist with data format, boundaries, and dependencies. These failures may result in intermittent and hard-to-isolate problems or errors.</b></p> <p>The ASI is executing physical and technical test scripts, with most tests passing. The ASI is planning to complete all Interface testing by the end of the overall SIT testing cycle.</p>	

Recommendations	Progress
• API interfaces should be tested for failure conditions during connection and transfer operations.	In Process
• FTP and file interfaces should be tested for data and file integrity.	In Process
• Test data fields for system impacts resulting from data that is poorly formatted, out of range, or other unexpected data transmission errors.	In Process

# IV&V Findings and Recommendations



## Testing

#	Key Findings	Criticality Rating
83	<p><b>Issue – Gaps in test coverage and slower-than-expected progress in testing may result in schedule delays if subsequent test phases uncover a higher volume of defects and user feedback than initially anticipated.</b></p> <p>Approximately 30% of the outstanding SIT tests are blocked in key areas of Eligibility and SSP, which also represent the highest areas of remaining unexecuted tests. Additionally, only a third of end-to-end (E2E) tests have passed, raising concerns about system readiness, integrations between the BES Modules (Case Management, Application Management, Financial Management), and stability.</p> <p>Defects continue to be concentrated in problematic areas of Reports and SSP, which also represent the top areas of reopened defects this month.</p>	<span>M</span>

Recommendations	Progress
• DHS and ASI revisit the testing approach to prioritize completion of remaining test activities and conduct comprehensive System Integration testing (SIT) to minimize defect leakage to User Acceptance Testing (UAT).	In Process
• ASI test team provide a visual of progress of test case execution compared to current testing schedule.	In Process

# IV&V Findings and Recommendations



## Security and Privacy

#	Key Findings	Criticality Rating
106	<p><b>Risk – Critical and high vulnerability and configuration scan findings are not remediated within the documented timeframes, potentially impacting the project schedule and causing delays.</b></p> <p>As of October 31st, 2025, BES had 11 critical findings in an open or in-progress state outside the 15-day remediation timeframe, and 1 critical finding was within the timeframe. BES had 27 high-rated findings in an open state outside the 30-day remediation timeframe, and 29 high-rated findings were within the timeframe. In addition to the critical and high POAM findings listed above, 14 critical findings and 33 high findings from 2024 are listed as deferred, which are part of the Oracle Cloud Infrastructure that Oracle is responsible for patching on a quarterly basis.</p>	<span>M</span>

Recommendations	Progress
<ul style="list-style-type: none"><li>Implement an escalation process to involve senior leadership if deadlines are missed.</li></ul>	In Process

# IV&V Findings and Recommendations



## Requirements Analysis & Management

#	Key Findings	Criticality Rating
94	<p><b>Risk - The lack of an effective way to validate BES requirements could lead to project delays and unfulfilled user needs if DHS later identifies unmet contractual requirements.</b></p> <p>DHS and the ASI conducted five additional collaborative working sessions to continue reviewing contract requirements that remain untraced or unfulfilled. The objective is to ensure all project requirements are accurately mapped, supporting complete and reliable traceability within the JIRA tool used to generate the Requirements Traceability Matrix (RTM) deliverable. The ASI reported as of July 17, 2025, out of the 2,971 requirements for the project, a total of 741 unmapped requirements were identified that were not mapped properly. Of these unmapped requirements, 349 have been reconciled, with 392 that remain outstanding, primarily within the categories of Implementation, and Maintenance &amp; Operations (M&amp;O) requirements. The ASI planned to deliver an interim RTM on 11/3/25. The ASI reported that due to the System Integrity Review Tool (SIRT) project revision taking priority, it has caused delays, and the interim RTM will be delayed by up to two weeks. Any potential delays will minimize the time the project team has to review the RTM to verify that all necessary BES functionality and supporting components have been developed and will be validated during current and future testing phases.</p>	<span style="border: 1px solid yellow; border-radius: 50%; padding: 2px 5px; color: yellow;">M</span>

Recommendations	Progress
• Develop a document that provides DHS with a feasible and effective way to map contract requirements to passed test cases, and, per the BI-19 (Complete and Final Test Plan), "Maps the implementation, functional and technical requirements to the test cases and test scripts".	In Process
• Ensure test scripts thoroughly and comprehensively test the system to assure each requirement is met.	In Process
• Develop a deliverable that provides an audit trail for changes to the requirements from the contract such as obsoleted requirements, when that decision was made, and the change requests.	In Process
• Weekly reporting on clean-up efforts in JIRA regarding incorrect statuses of epics, use case, and requirements.	In Process

# IV&V Status

# IV&V Engagement Status



IV&V Engagement Area	Aug	Sept	Oct	Comments
IV&V Budget				
IV&V Schedule				
IV&V Deliverables				PCG submitted the final September IV&V Monthly Status Report.
IV&V Staffing				
IV&V Scope				

Engagement Status Legend					
	The engagement area is within acceptable parameters.		The engagement area is somewhat outside acceptable parameters.		The engagement area poses a significant risk to the IV&V project quality and requires immediate attention.



- IV&V activities in the October reporting period:
  - Completed – September Monthly Status Report
  - Ongoing – Review the BES Project Artifacts and Deliverables
  - Ongoing – Attend BES Project meetings (see [Additional Inputs](#) pages for details)
  - Ongoing – Review available ASI contracts and contract amendment documentation
- Planned IV&V activities for the November reporting period:
  - Ongoing – Observe BES Design and Development sessions as scheduled
  - Ongoing – Observe Bi-Weekly Project Status meetings
  - Ongoing – Observe Weekly Architecture meetings
  - Ongoing – Observe Weekly Security meetings
  - Ongoing – Monthly IV&V findings meetings with the ASI
  - Ongoing – Monthly IV&V Draft Report Review with DHS, ETS, and ASI
  - Ongoing – Participate in Bi-Weekly DHS and IV&V Touch Base meetings
  - Ongoing – Review BES artifacts and deliverables



# Deliverables Reviewed

Deliverable Name	Deliverable Date	Version
BI-05 Project Schedule	10/01/2025, 10/08/2025, 10/15/2025, 10/22/2025, 10/29/2025	N/A
BI-02 Project Status Report	10/01/2025, 10/08/2025, 10/15/2025, 10/22/2025, 10/29/2025	N/A

# Additional Inputs – Artifacts



Artifact Name	Artifact Date	Version
FNS Handbook 901	01/2020	V2.4
NIST Special Publication 800-53 Security and Privacy Controls for Information Systems and Organizations	12/20/2020	Rev.5
R0.13 SIT Defect Dashboard	N/A	N/A
Interface Dashboard – Confluence page	N/A	N/A
Jira Requirements Details	N/A	N/A
Jira Testing Lists	N/A	N/A
BES R0.13 System Testing Results - CRs and Pending Epics	N/A	N/A
BES R0.13 System Testing Results - Core	N/A	N/A
Batch Defect Dashboard	N/A	N/A
Reporting Defect Dashboard	N/A	N/A

# Additional Inputs



## Meetings and/or Sessions Attended/Observed:

1. IV&V Team Meeting – 10/6/2025, 10/14/2025, 10/20/2025, 10/27/2025
2. HI DHS BES June Draft IV&V Report Review – 10/14/2025
3. Weekly BES Infrastructure meeting – 10/3/2025, 10/10/2025, 10/17/2025, 10/24/2025, 10/31/2025
4. Weekly Client BES 2023 Project Status Meeting – 10/1/2025, 10/8/2025, 10/15/2025, 10/22/2025, 10/29/2025
5. Security Touchpoint – 10/1/2025, 10/8/2025, 10/15/2025, 10/22/2025, 10/29/2025
6. (External) Weekly Interfaces Touchpoint – 10/6/2025, 10/20/2025, 10/27/2025
7. (External) Bi-weekly BES CCB Meeting – 10/1/2025, 10/8/2025, 10/15/2025, 10/22/2025, 10/29/2025
8. (External) CIA Current Monthly Checkpoint – 10/7/2025
9. (External) BES M&O Working Group – 10/1/2025, 10/8/2025, 10/15/2025, 10/22/2025
10. (External) Weekly BES Testing Workgroup Meeting – 10/2/2025, 10/9/2025, 10/16/2025, 10/23/2025, 10/30/2025
11. (External) BES Readiness/BI-29 Updates – 10/6/2025, 10/20/2025
12. eWorld/IV&V Mid-Month Check-in – 10/20/2025
13. (External) BES: OCM and Communications – 10/6/2025, 10/20/2025
14. (External) BES Data Conversion - DC Validation Issue Huddle – 10/1/2025, 10/10/2025
15. (External) BES Deferred Epics Discussion Meeting - cont'd – 10/6/2025, 10/20/2025, 10/27/2025
16. (External) 2<sup>nd</sup> BES Online Help Prototype(s) Review Meeting – 10/15/2025
17. (External) JAD Day 1 - CR2025-036 Alien SNAP Eligibility Changes – 10/3/2025
18. (External) JAD Day 2 - CR2025-036 Alien SNAP Eligibility Changes – 10/15/2025
19. (External) JAD CR2025-040 ABAWD and SNAP – 10/21/2025
20. (External) JAD CR2025-040 ABAWD and SNAP Work Requirements – 10/23/2025

# Appendices



# Appendix A – IV&V Criticality Ratings

Criticality Rating	Definition
<span data-bbox="176 462 226 515">H</span>	A high rating is assigned if there is a possibility of substantial impact to product quality, scope, cost, or schedule. A major disruption is likely, and the consequences would be unacceptable. A different approach is required. Mitigation strategies should be evaluated and acted upon immediately.
<span data-bbox="176 635 226 688">M</span>	A medium rating is assigned if there is a possibility of moderate impact to product quality, scope, cost, or schedule. Some disruption is likely, and a different approach may be required. Mitigation strategies should be evaluated and implemented as soon as feasible.
<span data-bbox="176 812 226 851">L</span>	A low rating is assigned if there is a possibility of slight impact to product quality, scope, cost, or schedule. Minimal disruption is likely, and some oversight is most likely needed to ensure that the risk remains low. Mitigation strategies should be considered for implementation when possible.



# Appendix B – Findings Log

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- The complete Findings Log for the BES Project is provided in a separate file.

# Appendix C – Acronyms and Glossary



Acronym	Definition
APD	Advance Planning Document
ASI	Application System Integrator
BES	Benefits Eligibility Solution
CCWIS	Comprehensive Child Welfare Information System
CM	Configuration Management
CMMI	Capability Maturity Model Integration
CMS	Center for Medicare and Medicaid Services
CR	Change Request
DDI	Design, Development and Implementation
DED	Deliverable Expectation Document
DHS	Hawaii Department of Human Services
DLV	Deliverable
E&E	Eligibility and Enrollment
EA	Enterprise Architecture
ECM	Enterprise Content Management (FileNet and DataCap)
ESI	Enterprise System Integrator (Platform Vendor)
ETS	State of Hawaii Office of Enterprise Technology Services
FIPS	Federal Information Processing Standard
HIPAA	Health Information Portability and Accountability Act of 1996
IDM	Identity and Access Management (from KOLEA to State Hub)
IEEE	Institute of Electrical and Electronics Engineers
IES	Integrated Eligibility Solution
ITIL	Information Technology Infrastructure Library



# Appendix C – Acronyms and Glossary

Acronym	Definition
IV&V	Independent Verification and Validation
KOLEA	Kauhale On-Line Eligibility Assistance
M&O	Maintenance & Operations
MEELC	Medicaid Eligibility and Enrollment Life Cycle
MEET	Medicaid Eligibility and Enrollment Toolkit
MOU	Memorandum of Understanding
MQD	Hawaii Department of Human Services MedQuest Division
NIST	National Institute of Standards and Technology
OE	Operating Environment
OIT	Department of Human Services Office of Information Technology
PIP	Performance/Process Improvement Plan
PMBOK®	Project Management Body of Knowledge
PMI	Project Management Institute
PMO	Project/Program Management Office
PMP	Project Management Plan
QA	Quality Assurance
QM	Quality Management
RFP	Request for Proposal
ROM	Rough Order of Magnitude
RMP	Requirements Management Plan
RTM	Requirements Traceability Matrix
SEI	Software Engineering Institute
SLA	Service-Level Agreement
SME	Subject Matter Expert



# Appendix C – Acronyms and Glossary

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Acronym	Definition
SOA	Service Oriented Architecture
SOW	Statement of Work, Scope of Work
VVP	Software Verification and Validation Plan
XLC	Expedited Life Cycle



# Appendix D – Background Information

## Systems Modernization Project

The DHS Enterprise Program Roadmap includes contracting with three separate vendors with the following high-level scope:

- ESI or Platform Vendor – responsible for the shared technology and services required for multiple Application vendors to implement and support functionality that leverages the DHS Enterprise Platform.
- ASI or ASI Vendor – responsible for the DDI of the Benefits Eligibility Solution (BES Project) enhancing the currently implemented Medicaid E&E Solution (KOLEA) and providing support for the combined Solutions.
- CCWIS Vendor – responsible for the DDI of the CCWIS Solution to meet the needs of child welfare services and adult protective services (CCWIS Project) and providing support for the Solution.

## Systems Modernization IV&V Project

IV&V performs objective assessments of the design, development/configuration and implementation (DDI) of DHS' System Modernization Projects. DHS has identified three high-risk areas where IV&V services are required:

- Transition of M&O from DHS' incumbent vendor to the ESI and ASI vendors
- BES DDI
- CCWIS DDI

On the BES DDI Project, IV&V is responsible for:

- Evaluating efforts performed by the Project (processes, methods, activities) for consistency with federal requirements and industry best practices and standards
- Reviewing or validating the work effort performed and deliverables produced by the ASI vendor as well as that of DHS to ensure alignment with project requirements
- Anticipating project risks, monitoring project issues and risks, and recommending potential risk mitigation strategies and issue resolutions throughout the Project's life cycle
- Developing and providing independent project oversight reports to DHS, ASI vendors, State of Hawaii Office of Enterprise Technology Services (ETS) and DHS' Federal partners



# Appendix D – Background Information

## What is Independent Verification and Validation (IV&V)?

- Oversight by an independent third party that assesses the Project against industry standards to provide an unbiased view to stakeholders
- The goal of IV&V is to help the State get the solution they want based on requirements and have it built according to best practices
- IV&V helps improve design visibility and traceability and identifies (potential) problems early
- IV&V objectively identifies risks and communicates to project leadership for risk management

## PCG's Eclipse IV&V® Technical Assessment Methodology

- Consists of a 4-part process made up of the following areas:
  1. **Discovery** – Discovery consists of reviewing documentation, work products and deliverables, interviewing project team members, and determining applicable standards, best practices and tools.
  2. **Research and Analysis** – Research and analysis is conducted in order to form an objective opinion.
  3. **Clarification** – Clarification from project team members is sought to ensure agreement and concurrence of facts between the State, the Vendor, and PCG.
  4. **Delivery of Findings** – Findings, observations, and risk assessments are documented in this monthly report and the accompanying Findings and Recommendations log. These documents are then shared with project leadership on both the State and Vendor side for them to consider and take appropriate action on.

## IV&V Assessment Categories for the BES Project

• Project Management	• Security and Privacy
• Requirements Analysis & Management	• Testing
• System Design	• OCM and Knowledge Transfer
• Configuration and Development	• Pilot Test Deployment
• Integration and Interface Management	• Deployment
• Data Management and Conversion	



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**Solutions that Matter**



ID	Title	Reporter	Finding Type	Identified Date	Category	Observation	Significance	Recommendation	Event Horizon	Impact	Probability	Analyst Priority	Finding Status	Status Update	Client Comments	Vendor Comments
83	Gaps in test coverage and slower-than-expected progress in testing may result in schedule delays if subsequent test phases uncover a higher volume of defects and user feedback than initially anticipated.	Ho, Justin	Finding - Issue	6/2/2023	Testing	After reviewing the Project R11 QA Dashboards, R11 Traceability Dashboards, and Test Repertoire, gaps in testing coverage may exist and the progress of testing might be lagging. Concerning testing coverage, it appears that not all epics and use cases in R11 have associated test cases or are testing the correct use cases. In terms of progress, some test cases remain unexecuted and others are in progress. This may indicate that the team has commenced System Integration Testing (SIT). The ASI has plans to complete the INT/INT criteria by June 16, 2023, about 2 weeks after SIT begins.	Significance: Defects early is vital for effective testing, as it is more efficient and cost-effective to address issues during the early testing stages. If there is slow progress or incomplete testing in the early stages, it can result in more defects leaking into subsequent testing phases, necessitating more extensive and rigorous testing efforts. Insufficient testing coverage can lead to incomplete test cases and potential test cases that are not executed. This may result in encountering significant delays, extensions, or the introduction of bugs into the production environment during the final testing stage, known as Final Acceptance Testing (FAT).	OPEN • ASI needs to reassess the testing approach to prioritize completion of remaining test activities and conduct comprehensive System Integration testing (SIT) to minimize defect leakage to User Acceptance Testing (UAT). • ASI test team provide a vision of progress of test case execution compared to current testing schedule. • CLOSED • ASI assess the potential impact of the current testing approach on the overall project timeline and resources. ASI should consider adopting a more robust and efficient development process - ASI should implement a revised testing approach to improve the completeness and thoroughness of future testing cycles. The ASI should determine the root cause of the testing coverage gaps and the reasons for the lagging progress. ASI should implement effective improvement processes to confirm early testing is adequate before entering UAT/FAT (Closed 4/30/2024) • DHS and ASI monitor INT/INT closely for both build and execution of tests to ensure the test coverage is adequate. ASI should also ensure that the two phases of SIT are planned to address and resolve outstanding SIT defects and apply the fixes in the FAT environment, ensuring that these defects do not recur when FAT resumes, confirming the existence and resolution of these defects.	UAT	4	4	Med	Open	10/12/23 - Approximately 20% of the outstanding SIT tests are blocked in key areas of Eligibility and SSP, which also represent the highest areas of remaining unexecuted tests. Additionally, only one third of end-to-end (E2E) tests have passed, raising concerns about system readiness, integrations between the BES Modules (Case Management, Application Management, Financial Management, and Reporting). ASI has identified significant issues in the BES modules, particularly in the areas of Reports and SSP, which also represent the top areas of reopened defects this month. 9/30/23 - The ASI plans to complete all SIT (scripted tests) by the end of October; however, approximately 80% of end-to-end (E2E) tests remain unexecuted. This timeline is critical as the remaining tests is essential for detecting integration issues, validating system stability, and reinforcing stakeholder confidence. Mid-month, the ASI added additional resources to the HAMVA team, bringing the total of assigned SIT tests (excluding E2E) to 100. The ASI has increased confidence in completing all tests on schedule. Key integration areas with pending execution include HAMVA integration, Eligibility, and Mass Change. ASI needs a dedicated timeline in test execution to maintain velocity compared to the planned timeline. This timeline is critical as the remaining tests which have completed are scheduled to move to the October execution target. Additionally, the ASI observes a notable volume of blocked tests and unresolved defects, with approximately 50% of these defects created during the month. 8/31/23 - ASI is testing continuously to progress. While execution of E2E tests is slow, the testing progress is encouraging as the remaining key blocking defects are being addressed. Timely execution of these tests will enable prompt detection of critical integration issues, validate system stability, and reinforce stakeholder confidence. Recent test results indicate that while the weekly rate of defect discovery remains stable, the rate of resolution, steady progress is observed, with approximately 60% of high-severity and high-visibility defects being resolved by month end.	Client Comments: 9/17/2023. We performed the inclusion of ASI in the list of highest volume of identified defects in our previous meeting. For 8/7/23, there are 55 ASI related defects identified so far out of 100. 35 defects are in DWH. Details can be made available if needed. We request ASI be removed from the list.	4/17/2023. We performed the inclusion of ASI in the list of highest volume of identified defects in our previous meeting. For 8/7/23, there are 55 ASI related defects identified so far out of 100. 35 defects are in DWH. Details can be made available if needed. We request ASI be removed from the list.
80	Development delays have negatively impacted the project schedule and delayed go-live.	Fors, Michael	Finding - Issue	6/30/2022	Configuration and Development	ASI had previously reported development activities have been slowed as they have been unable to achieve and/or maintain their expected development velocity. Previously, the development team was challenged with accurately estimating development task level of effort (i.e., story points) and the project has been challenged with producing a project schedule that accurately reflects realistic timelines (see Finding #74). The ASI continues to be challenged with finding qualified resources in a timely manner.	OPEN • ASI provides DSI with the time needed to effectively evaluate the software development (SDev) and elicit productive design discussions with DHS attendees during each demo. • The project closely monitors progress on development efforts that are complex and/or require a substantial level of effort and create a mitigation plan to avoid delays. • ASI reviews the development tasks and identifies that some of these tasks are not clearly defined and lack detail. ASI should reassess the total amount of remaining work to reach go-live and present a dynamic burn-down chart to clearly display progress to stakeholders. (closed 3/31/2023) • ASI effectively tracks and regularly provides DHS informationally via ASI BAs/SAs who have presented less than optimal designs and left in-depth design discussions (see Finding #61). • ASI has contributed to unproductive design sessions (see Finding #61). • It remains unclear if scope creep has contributed to these delays.	Immediate	3	3	Med	Open	10/12/23 - It remains unclear if any development tasks may delay the project timeline. It is anticipated that the remaining tasks (10/12/23) for ABAND and SNOW Work Requirements updates will not be completed until 1/26/2024, which is after the planned start for User Acceptance Testing (UAT). To move forward in this function after UAT has been completed, ASI and DHS need to agree on a timeline for the remaining tasks to go-live for Pilot and statewide implementation. 9/30/2023 - The ASI has indicated its intent to leverage AI-based tools to support unit testing, which may increase developer productivity. However, IV&V remains concerned that the planned AI-based tools will increase the complexity of the development lifecycle and hinder overall productivity. 8/31/2023 - The ASI is reporting System Integration Testing (SIT) is progressing as planned. IV&V continues to monitor for potential development delays as the ASI continues to implement the improvements and timely completion of the SIT phase. The project team indicated they plan to introduce new functionality during UAT which may slow defect repair, reward, and reporting. ASI continues to encourage developers to leverage resulting in the least impact to the project and production environment. 8/31/2023 - ASI appears to be making good progress with System Integration Testing (SIT). It remains unclear whether development delays will impact the completion of SIT. 6/30/2023 - It remains unclear to IV&V whether there has been movement on the remaining tasks. However, it is anticipated that unresolved defect counts were low enough to meet the criteria (below 20% of all reported defects) for entering SIT. IV&V raised questions regarding the inclusion of defects that were prior to INT that were not removed by the end of INT. ASI has indicated that these defects are low priority and system stability risks, which could lead to slower development and unexpected project delays. 5/31/2023 - DHS stated that the ASI had not accounted for several SIT defects resulting from the lack of clear cause in the status of the BES shared resources. The ASI stated that the shared resources and Bindplane software that occur in testing environments should not be present in production. However, IV&V has not yet been provided with artifacts or plans to determine how to resolve these issues. It will not materially affect UAT or Production environments. 9/30/2023 - IV&V appears to be progressing on the full build out of the Secure Enclosure. IV&V remains concerned that this build out adds additional complexity to the infrastructure environment which can further exacerbate this risk. 8/31/2023 - ASI has indicated communication with the DHS shared platform team and the BES project has improved, reducing the likelihood of unresolvable or unexpected issues arising from the shared platform moving forward. The project elected to add a new AI tool to its suite of tools to assist with the development of the BES. The project team has initiated M&O planning sessions, the project team identified areas such as Security and Incident Management, BES Infrastructure operational readiness may differ from the current capabilities in the legacy system. How this will impact the shared implementation timelines and the scope of M&O planning and support, is not yet known. 7/30/2023 - The project appears to be making efforts to improve communications between the shared platform team and the BES project. IV&V remains concerned that changes to the shared platform may negatively impact the project schedule and budget. 6/30/2023 - IV&V remains concerned that changes to the BES shared platform could negatively impact the BES project schedule. Governance over the platform has yet to be formalized and the team has not yet determined the overall lack of effective communication around the recent changes shared services. 7/31/2023 - The BES system currently relies on services provided by the shared platform.	Client Comments: 4/11/2023. Please elaborate - what additional functionality during UAT is being referenced here?	4/11/2023. Please elaborate - what additional functionality during UAT is being referenced here?	
73	The planned BES infrastructure is complex which could be difficult to implement and lead to schedule/cost impacts.	Frasca, Joe	Finding - Risk	10/28/2021	System Design	Current ASI infrastructure plans include a significant number of sophisticated components that make up a complex cloud infrastructure. Further, the Project Team has yet to finalize components that will make up the BES infrastructure and the additional costs and time to configure, test, and implement the planned complex environment remain unclear.	If the level of effort to implement and manage the completion of the BES infrastructure is not accurately accounted for and staffed by the ASI, the project could be met with unexpected costs and schedule delays. Delays in finalizing the components being implemented could exacerbate this risks and lead to further delays. Complex planning and management of the BES infrastructure will be required to ensure the system can handle the increased potential for system failure (i.e., due to the significant number of "moving parts") and increase the level of effort and resource to resolve infrastructure and application level bugs. Further, some components are in an immature state and contain known bugs. For example, the project recently experienced a system failure because Google Cloud failed to clearly communicate a change to lead to failure in another component (i.e., Nexus). Google Cloud is generally viewed as a less mature product and has been known to experience system failures (see Google Cloud Infrastructure Failure (Google Cloud Infrastructure Failure)). IV&V remains concerned that this could lead to failures at critical points in the project (including post-go-live production failures) that could be difficult to resolve and lead to project disruption. If IV&V intends to own the risks, IV&V should have a clear understanding over who is responsible for the ownership of M&O outcomes and BES tasks to State employees, they can face challenges supporting tools they may not be familiar with in a complex infrastructure environment.	OPEN • ASI develops a process to closely monitor cloud and other product changes (Software updates/holes), manage changes, and regression test once changes/updates are applied. • The project team work to establish strong governance over the development and maintenance of the various system tools/infrastructure. • ASI will continue to schedule the planned prioritized projects to ensure infrastructure components are as planned. • ASI maintains a detailed schedule for DevOps implementation tasks to avoid unexpected delays that could delay project milestones and the critical path.	Next several months	2	2	Low	Open	10/12/23 - ASI has not yet accounted for several SIT defects resulting from the lack of clear cause in the status of the BES shared resources. The ASI stated that the shared resources and Bindplane software that occur in testing environments should not be present in production. However, IV&V has not yet been provided with artifacts or plans to determine how to resolve these issues. It will not materially affect UAT or Production environments. 9/30/2023 - IV&V appears to be progressing on the full build out of the Secure Enclosure. IV&V remains concerned that this build out adds additional complexity to the infrastructure environment which can further exacerbate this risk. 8/31/2023 - ASI has indicated communication with the DHS shared platform team and the BES project has improved, reducing the likelihood of unresolvable or unexpected issues arising from the shared platform moving forward. The project elected to add a new AI tool to its suite of tools to assist with the development of the BES. The project team has initiated M&O planning sessions, the project team identified areas such as Security and Incident Management, BES Infrastructure operational readiness may differ from the current capabilities in the legacy system. How this will impact the shared implementation timelines and the scope of M&O planning and support, is not yet known. 7/30/2023 - The project appears to be making efforts to improve communications between the shared platform team and the BES project. IV&V remains concerned that changes to the shared platform may negatively impact the project schedule and budget. 6/30/2023 - IV&V remains concerned that changes to the BES shared platform could negatively impact the BES project schedule. Governance over the platform has yet to be formalized and the team has not yet determined the overall lack of effective communication around the recent changes shared services. 7/31/2023 - The BES system currently relies on services provided by the shared platform.	Client Comments: 2/13/2023. Perhaps for the next M&S we should review the outstanding recommendations to ensure progress status is reflected accurately.	2/13/2023. We don't believe this issue "Development delays..." is still an active concern.
70	Insufficient configuration management could lead to development confusion and reduce the effectiveness of defect resolution	Fors, Michael	Finding - Risk	8/23/2021	Configuration and Development	The BES DSI Plan Deliverable, Section 5.2 establishes the framework for the Configuration Management Plan; however, it remains unclear if sufficient progress has been made toward establishing CM processes and governance, selecting CM tools (e.g., CMDB), and building out the CM infrastructure. The project's Security Plan has yet to be finalized and may include additional requirements for configuration management. The project currently relies on GitHub for tracking of some configurations.	Configuration Management is a set of processes and procedures that ensure the BES is understood and works correctly. The BES solution includes tools that may provide a level of automation for Configuration Management that may reduce the time it should take the project team to validate, document, and apply changes to the configuration items. However, it is unclear that this has applied to the full list of items that are included in the configuration plan along with the details regarding the management of the configuration items, reporting and audit features.	OPEN • ASI adheres to plans for configuration management as documented in BES DSI Plan, Section 5.2 and clearly details and/or any changes with DHS. • ASI validate plans for configuration management with DHS and agree on a meaningful set of configuration items or settings they will track. • ASI validate, document, and apply changes to the configuration items. • CMDB (e.g., DHS and ASI work to clarify the CMDB's role in the potential configuration management activities). • Identify the DHS POC for the Configuration Management Activities that would provide oversight of configuration management activities and assure defined CM steps and plans are being followed, are effective, and are achieving DHS objectives for CM.	ASAP	2	2	Low	Open	10/12/2023 - Additional information was provided to the ASI regarding progress in creating an implementation configuration management plan for the BES, but as of the end of the reporting period no additional status information was provided. 9/30/2023 - No material update. 8/31/2023 - No material update. 7/30/2023 - No material update. 6/30/2023 - The ASI continues to make progress building out the configuration management plan. The ASI is currently leveraging ServiceNow to automate some processes to streamline configuration management. However, it remains unclear if the configuration management database will be robust enough to offer users clear and easy-to-use tools to manage the configuration management database to support configuration changes. This could hinder defect tracing and delay repair efforts and lead to project delays. 5/31/2023 - No material update. 4/30/2023 - IV&V continues to await receipt of the Configuration Management Plan from the ASI. 3/31/2023 - ASI continues to work on the Configuration Management Plan (CMP). 2/28/2023 - The ASI has reported progress in constructing their configuration management database within ServiceNow, having recently implemented the configuration items (CIs). 1/31/2023 - ASI continues to work on the Configuration Management Plan (CMP). 1/31/2023 - No material update. 11/30/2024 - This finding will be reevaluated after the project team completes the re-planning and determines the approach, requirements/functionality, and schedule for the Pilot and Statewide rollout. 9/26/24 - The ASI had received stakeholder input to update their Configuration Management Plan (CMP) of the BES for the Pilot and Statewide rollout. 10/31/24 - This finding will be reevaluated by the ASI after the project team completes the re-planning and determines the approach, requirements/functionality, and schedule for the Pilot and Statewide rollout. Configuration Management Plan (CMP) of the BES for the Pilot and Statewide rollout procedures by 9/20/24 but has since experienced some delays in completing these activities. 8/22/24 - IV&V yet to receive a detailed,	Client Comments: 7/10/2023. It does not appear our feedback was received. We mention that in our last meeting that configuration management is in place, and we are currently working on leveraging ServiceNow to automate the process. So, the configuration management is not in place prior to SIT not accurate.	7/10/2023. It does not appear our feedback was received. We mention that in our last meeting that configuration management is in place, and we are currently working on leveraging ServiceNow to automate the process. So, the configuration management is not in place prior to SIT not accurate.